Claims 1 – 60 (canceled).

**Claim 61.     (Currently Amended)**

A method of communication between a first object located on a first computer and a second object located on a second computer, the first and second computers connected by a network, the method comprising:

calling an interface of the second object by the first object on the first computer, ~~wherein the interface of the second object is identified only with an interface pointer identifier,~~ and wherein the calling the interface of the second object by the first object comprises (a) bypassing a mechanism, the bypassed mechanism comprising adding a remote procedure call (RPC) interface identifier (IID) of the second object to the call, and (b) adding an alternative identifier to the call;

performing ~~remote procedure call~~ RPC utility functions on the call at the first computer; and

communicating the call to the second computer, wherein the second computer:

receives the call~~,~~;

performs ~~remote procedure call~~ RPC utility functions on the call~~,~~;

determines if the call includes the alternative identifier:

if the call does not include the alternative identifier, calls an RPC dispatching function;

if the call does include the alternative identifier, calls an alternative dispatching function based on the alternative identifier, bypassing the RPC dispatching function; ~~passes the call to a dispatching function so as to bypass a remote procedure call dispatching function,~~

invokes a stub~~,~~; and

accesses the interface of the second object identified by the ~~interface pointer identifier~~ alternative identifier.

Claim 62.     (Previously Presented)

The method of claim 61 wherein the calling of the interface comprises:

posting, on the first computer, a first send buffer and a first receive buffer prior to sending a first data to the second computer, wherein the first receive buffer will receive a second data from the second computer, and wherein the first receive buffer is posted to be of sufficient size to accept the second data; and

sending the first data to the second computer via the first send buffer.

Claim 63.    (Previously Presented)

The method of claim 62 wherein the calling further comprises: cleaning up, on the first computer, a second receive buffer after sending the first data to the second computer and prior to receiving the second data from the second computer.

64. (Previously Presented) The method of claim 62 wherein the calling further comprises: cleaning up, on the first computer, a second send buffer after sending the first data to the second computer and prior to receiving the second data from the second computer.

Claim 65.    (Canceled)

Claim 66.    (Previously Presented)

The method of claim 61 wherein the first computer has a first memory location and a buffer, and access to the network through an interface card on the first computer, the method further comprising:

placing in the buffer a copy of a first pointer to a first parameter, wherein the first parameter is used in the calling of the interface of the second object and wherein the first pointer points to the first parameter in the first memory location; and

transmitting, by the network interface card, the first parameter pointed to by the first pointer by reading the first parameter out of the first memory location.

Claim 67. (Previously Presented)

The method of claim 66 further comprising issuing a notification on the first computer after the network interface card has finished reading the first parameter out of the first memory location.


Claim 68. (Canceled)


Claim 69. (Previously Presented)

The method of claim 66 further comprising:

placing in the buffer a copy of the first pointer to the first parameter and a copy of a second pointer to a second parameter, wherein the second parameter is used in the calling of the interface of the second object and wherein the second pointer points to the second parameter in a second memory location on the first computer; and

transmitting, by the network interface card, the first parameter pointed to by the first pointer by reading the parameter out of the first memory location and the second parameter pointed to by the second pointer by reading the second parameter out of the second memory location.

Claim 70.    (Currently Amended)

The method of claim 69 further comprising:

issuing a first notification on the first computer after the network interface card has finished reading the first parameter out of the first memory location; and

issuing a second notification on the first computer after the network interface card has finished reading the second parameter out of the second memory location.

Claim 71.    (Currently Amended)

The method of claim 70 further comprising:

reclaiming the first memory location after receiving the first notification; and

reclaiming the second memory location after receiving the second notification.

Claim 72.    (Previously Presented)

The method of claim 66 wherein the transmitting comprises:

posting, on the first computer, a first send buffer and a first receive buffer prior to sending a first data to the second computer, wherein the first receive buffer will receive a second data from the second computer, and wherein the first receive buffer is posted to be of sufficient size to accept the second data; and

sending the first data to the second computer via the first send buffer.

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Claim 73.     (Previously Presented)

The method of claim 72 wherein the transmitting further comprises:

cleaning up, on the first computer, a second receive buffer after sending the first data to the second computer and prior to receiving the second data from the second computer.

Claim 74.     (Previously Presented)

The method of claim 72 wherein the transmitting further comprises:

cleaning up, on the first computer, a second send buffer after sending the first data to the second computer and prior to receiving the second data from the second computer.

Claim 75.     (Canceled)

Claim 76.    (Currently Amended)

<u>One or more</u> [[A]] computer-readable medium having computer-executable instructions to enable communications between a first object located on a first computer and a second object located on a second computer, the first and second computers connected by a network, the computer-executable instructions performing steps comprising:

calling an interface of the second object by the first object on the first computer, ~~wherein the interface of the second object is identified only with an interface pointer identifier, and~~ wherein the computer-executable instructions for calling the interface of the second object by the first object comprise <u>(a)</u> computer-executable instructions for bypassing computer executable instructions, the bypassed computer-executable instructions comprising adding a remote procedure call <u>(RPC)</u> interface identifier <u>(IID) of the second object</u> to the call<u>, and (b) adding an alternative identifier to the call</u>;

performing ~~remote procedure call~~ <u>RPC</u> utility functions on the call at the first computer; and

communicating the call to the second computer, wherein the second computer<u>:</u>

receives the call~~,~~<u>;</u>

performs ~~remote procedure call~~ <u>RPC</u> utility functions on the call~~,~~<u>;</u>

<u>determines if the call includes the alternative identifier;</u>

<u>if the call does not include the alternative identifier, calls an RPC dispatching function;</u>

if the call does include the alternative identifier, calls an alternative dispatching function based on the alternative identifier, bypassing the RPC dispatching function; ~~passes the call to a dispatching function so as to bypass a remote procedure call dispatching function,~~

invokes a stub~~,~~; and

accesses the interface of the second object identified by the ~~interface pointer identifier~~ alternative identifier.

Claim 77.    (Currently Amended)

The one or more computer–readable medium of claim 76 wherein the calling of the interface comprises:

posting, on the first computer, a first send buffer and a first receive buffer prior to sending a first data to the second computer, wherein the first receive buffer will receive a second data from the second computer, and wherein the first receive buffer is posted to be of sufficient size to accept the second data; and sending the first data to the second computer via the first send buffer.

Claim 78.    (Currently Amended)

The one or more computer–readable medium of claim 77 wherein the calling further comprises:

cleaning up, on the first computer, a second receive buffer after sending the first data to the second computer and prior to receiving the second data from the second computer.

Claim 79.    (Currently Amended)

The <u>one or more</u> computer-readable medium of claim 77 wherein the calling further comprises:

cleaning up, on the first computer, a second send buffer after sending the first data to the second computer and prior to receiving the second data from the second computer.


Claim 80.    (Canceled)


Claim 81.    (Currently Amended)

The <u>one or more</u> computer-readable medium of claim 76, wherein the first computer has a first memory location and a buffer, and access to the network through an interface card on the first computer, having further computer-executable instructions for performing steps comprising:

placing in the buffer a copy of a first pointer to a first parameter, wherein the first parameter is used in the calling of the interface of the second object and wherein the first pointer points to the first parameter in the first memory location; and transmitting, by the network interface card, the first parameter pointed to by the first pointer by reading the first parameter out of the first memory location.

Claim 82.     (Currently Amended)

The <u>one or more</u> computer-readable medium of claim 81 having further computer-executable instructions for performing steps comprising:

issuing a notification on the first computer after the network interface card has finished reading the first parameter out of the first memory location.


Claim 83.     (Currently Amended)

The <u>one or more</u> computer-readable medium of claim 82 having further computer-executable instructions for performing steps comprising:

reclaiming the first memory location after receiving the notification.


Claim 84.     (Currently Amended)

The <u>one or more</u> computer-readable medium of claim 81 having further computer-executable instructions for performing steps comprising:

placing in the buffer a copy of the first pointer to the first parameter and a copy of a second pointer to a second parameter, wherein the second parameter is used in the calling of the interface of the second object and wherein the second pointer points to the second parameter in a second memory location on the first computer; and

transmitting, by the network interface card, the first parameter pointed to by the first pointer by reading the parameter out of the first memory location and the second parameter pointed to by the second pointer by reading the second parameter out of the second memory location.

Claim 85.     (Currently Amended)

The one or more computer-readable medium of claim 84 having further computer-executable instructions for performing steps comprising:

issuing a first notification on the first computer after the network interface has finished reading the first parameter out of the first memory location; and

issuing a second notification on the first computer after the network interface card has finished reading the second parameter out of the second memory location.

Claim 86.     (Currently Amended)

The one or more computer-readable medium of claim 85 having further computer-executable instructions for performing steps comprising:

reclaiming the first memory location after receiving a notification and reclaiming the second memory location after receiving the second notification.

Claim 87.    (Currently Amended)

The <u>one or more</u> computer-readable medium of claim 81 wherein the transmitting comprises:

posting, on the first computer, a first send buffer and a first receive buffer prior to sending a first data to the second computer, wherein the first receive buffer will receive a second data from the second computer, and wherein the first receive buffer is posted to be of sufficient size to accept the second data; and

sending the first data to the second computer via the first send buffer.

Claim 88.    (Currently Amended)

The <u>one or more</u> computer-readable medium of claim 87 wherein the transmitting further comprises:

cleaning up, on the first computer, a second receive buffer after sending the first data to the second computer and prior to receiving the second data from the second computer.

Claim 89.    (Currently Amended)

The <u>one or more</u> computer-readable medium of claim 87 wherein the transmitting further comprises:

cleaning up, on the first computer, a second send buffer after sending the first data to the second computer and prior to receiving the second data from the second computer.

Claim 90.    (Canceled)


Claim 91.    (Currently Amended)

A method of communication between a first object located on a first computer and a second object located on a second computer, the first and second computers connected by a network, the method comprising:

receiving, at the second computer, a call to an interface of the second object from the first object on the first computer, ~~wherein the interface of the second object is identified only with an interface pointer identifier~~;

performing remote procedure call (RPC) utility functions on the received call, wherein the ~~remote procedure call~~ RPC utility functions are performed on the received call by a ~~remote procedure call~~ RPC utility layer, the ~~remote procedure call~~ RPC utility layer comprising a pointer to [[the]] an alternative dispatching function, wherein the pointer allows the call to be passed directly to the dispatching layer;

determining the call does not contain an RPC interface identifier (IID);

passing the received call to the alternative [[a]] dispatching function so as to bypass a ~~remote procedure call~~ RPC dispatching function, wherein the bypassed RPC dispatching function would have otherwise been called if the RPC IID was contained in the call;

invoking a stub; and

accessing the interface of the second object ~~identified by the interface pointer identifier~~.

Claim 92      (Previously Presented)

The method of claim 91 wherein the receiving comprises:

storing, on the second computer, a second data into a first receive buffer, wherein the first receive buffer was posted prior to sending a first data to the first computer.


Claim 93.     (Canceled)


Claim 94.     (Previously Presented)

The method of claim 92 wherein the receiving further comprises:

cleaning up, on the second computer, a send buffer after sending the first data to the first computer and prior to receiving the second data from the first computer.


Claim 95.     (Previously Presented)

The method of claim 92 wherein the receiving further comprises: cleaning up, on the second computer, a second receive buffer after sending the first data to the first computer and prior to receiving the second data from the first computer.

Claim 96.     (Previously Presented)

The method of claim 91 wherein the second computer has a memory storage location and a buffer, and access to the network through a network interface card on the second computer, the method further comprising:

receiving a call from the first object on the interface of the second object;

receiving, by the network interface card, a parameter of the call from the first object;

storing the parameter in a memory location; and

accessing, by the second object, the parameter.


Claim 97.     (Previously Presented)

The method of claim 96 wherein the memory location is the buffer, and wherein the accessing the parameter is performed in the buffer.


Claim 98.     (Previously Presented)

The method of claim 97 further comprising copying the parameter from the buffer into the memory storage location, wherein the accessing the parameter is performed in the memory storage location.


Claim 99.     (Previously Presented)

The method of claim 96 wherein the memory location is the memory storage location, and wherein the accessing the parameter is performed in the memory storage location.

Claim 100.   (Previously Presented)

The method of claim 96 wherein the receiving comprises:

storing, on the second computer, a second data into a first receive buffer, wherein the first receive buffer was posted prior to sending a first data to the first computer, and wherein the first receive buffer was posted to be of sufficient size to accept the second data.


Claim 101.   (Canceled)


Claim 102.   (Previously Presented)

The method of claim 100 wherein the receiving further comprises:

cleaning up, on the second computer, a send buffer after sending the first data to the first computer and prior to receiving the second data from the first computer.


Claim 103.   (Previously Presented)

The method of claim 100 wherein the receiving further comprises:

cleaning up, on the second computer, a second receive buffer after sending the first data to the first computer and prior to receiving the second data from the first computer.

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Claim 104.    (Currently Amended)

[[A]] One or more computer-readable medium having computer-executable instructions to enable communications between a first object located on a first computer and a second object located on a second computer, the first and second computers connected by a network, the computer-executable instructions performing steps comprising:

receiving, at the second computer, a call to an interface of the second object from the first object on the first computer~~, wherein the interface of the second object is identified only with an interface pointer identifier~~;

performing remote procedure call (RPC) utility functions on the received call, wherein the computer-executable instructions for performing ~~remote procedure call~~ RPC utility functions on the received call comprise a pointer to the dispatching function, wherein the pointer allows the call to be passed directly to the dispatching layer;

determining the call does not contain an RPC interface identifier (IID);

passing the received call to a dispatching function so as to bypass a ~~remote procedure call~~ RPC dispatching function, wherein the bypassed RPC dispatching function would have otherwise been called if the RPC IID was contained in the call;

invoking a stub; and

accessing the interface of the second object ~~identified by the interface pointer identifier~~.

Claim 105. (Currently Amended)

The <u>one or more</u> computer-readable medium of claim 104 wherein the receiving comprises: storing, on the second computer, a second data into a first receive buffer, wherein the first receive buffer was posted prior to sending a first data to the first computer.

Claim 106. (Currently Amended)

The <u>one or more</u> computer-readable medium of claim 105 wherein the first data to the first computer was sent prior to receiving the second data from the first computer.

Claim 107. (Currently Amended)

The <u>one or more</u> computer-readable medium of claim 105 wherein the receiving further comprises:

cleaning up, on the second computer, a send buffer after sending the first data to the first computer and prior to receiving the second data from the first computer.

Claim 108. (Currently Amended)

The <u>one or more</u> computer-readable medium of claim 105 wherein the receiving further comprises:

cleaning up, on the second computer, a second receive buffer after sending the first data to the first computer and prior to receiving the second data from the first computer.

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Claim 109.   (Currently Amended)

The <u>one or more</u> computer-readable medium of claim 104, wherein the second computer has a memory storage location and a buffer, and access to the network through a network interface card on the second computer, having further computer-executable instructions for performing steps comprising:

receiving a call from the first object on the interface of the second object;

receiving, by the network interface card, a parameter of the call from the first object;

storing the parameter in a memory location; and

accessing, by the second object, the parameter.


Claim 110.   (Currently Amended)

The <u>one or more</u> computer-readable medium of claim 109 wherein the memory location is the buffer, and wherein the accessing the parameter is performed in the buffer.


Claim 111.   (Currently Amended)

The <u>one or more</u> computer-readable medium of claim 110 having further computer-executable instructions for performing steps comprising:

copying the parameter from the buffer into the memory storage location, wherein the accessing the parameter is performed in the memory storage location.

Claim 112. (Currently Amended)

The <u>one or more</u> computer-readable medium of claim 109 wherein the memory location is the memory storage location, and wherein the accessing the parameter is performed in the memory storage location.

Claim 113. (Currently Amended)

The <u>one or more</u> computer-readable medium of claim 109 wherein the receiving comprises:

storing, on the second computer, a second data into a first receive buffer, wherein the first receive buffer was posted prior to sending a first data to the first computer, and wherein the first receive buffer was posted to be of sufficient size to accept the second data.

Claim 114 (Currently Amended)

The <u>one or more</u> computer-readable medium of claim 113 wherein the first data to the first computer was sent prior to receiving the second data from the first computer.

Claim 115. (Currently Amended)

The <u>one or more</u> computer-readable medium of claim 113 wherein the receiving further comprises:

cleaning up, on the second computer, a send buffer after sending the first data to the first computer and prior to receiving the second data from the first computer.

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Claim 116.   (Currently Amended)

The <u>one or more</u> computer-readable medium of claim 113 wherein the receiving further

comprises:

cleaning up, on the second computer, a second receive buffer after sending the first data to the first computer and prior to receiving the second data from the first computer.

Claim 117.   (Previously Presented)

A computing device comprising:

an object, the object comprising an interface that is called by a second object on a second computing device~~, wherein the interface is identified only with an interface pointer identifier~~;

a network connection, wherein the network connection communicationally connects the computing device to the second computing device;

a remote procedure call (RPC) utility layer, wherein the ~~remote procedure call~~ RPC utility layer (a) determines whether the call contains an RPC interface identifier (IID), (b) performs ~~remote procedure call~~ RPC utility functions on the interface call by the second object, and (c) passes the interface call to a dispatching function , the dispatching function being a RPC ~~so as to bypass a remote procedure call~~ dispatching function when the call contains an RPC IID, and an alternative dispatching function when the call does not contain an RPC IID, and wherein the ~~remote procedure call~~ RPC utility layer comprises a pointer to the alternative dispatching function, wherein the pointer allows the call to be passed directly to the alternative dispatching function; and

a dispatching layer comprising the alternative dispatching function, wherein the dispatching layer invokes a stub and accesses the interface ~~identified by the interface pointer identifier~~.

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Claim 118.    (Previously Presented)

A computing device comprising:

an object, the object calling an interface of a second object on a second computing device, ~~wherein the interface is identified only with an interface pointer identifier~~;

a remote procedure call utility layer, wherein the remote procedure call utility layer performs remote procedure call utility functions on the call;

a bypass of a mechanism, the mechanism comprising adding a remote procedure call <u>(RPC)</u> interface identifier <u>(IID)</u> to the call; and

a network connection, wherein the network connection communicates the call to the second computing device, and wherein further the second computing device receives the call, performs ~~remote procedure call~~ <u>RPC</u> utility functions on the call, <u>determines whether the call contains the RPC IID, when the call contains the RPC IID, passes the call to a RPC dispatching function, when the call does not contain the RPC IID,</u> passes the call to a<u>n alternative</u> dispatching function so as to bypass ~~a remote procedure call~~ <u>the RPC</u> dispatching function, invokes a stub, and accesses the interface of the second object ~~identified by the interface pointer identifier~~.

Claim 119.    (New)

The method of communication of claim 61, wherein the alternative identifier is more specific than the RPC IID

Claim 120. (New)

The method of communication of claim 119, wherein the alternative identifier uniquely identifies the interface of the second object.

Claim 121. (New)

The one or more computer-readable medium of claim 76, wherein the alternative identifier is an interface pointer identifier (IPID).

Claim 122. (New)

The method of communication of claim 91 further comprising:

determining the call contains an alternative identifier, wherein the accessing the interface of the second object is based on the alternative identifier;

Claim 123. (New)

The computer-readable medium of claim 104, the steps further comprising:

determining the call contains an alternative identifier, wherein the accessing the interface of the second object is based on the alternative identifier.

Claim 124. (New)

The computing device of claim 117, wherein the RPC utility layer further determines the call contains an alternative identifier, wherein the dispatching layer accessing the interface is based on the alternative identifier;

Claim 125. (New)

The computing device of claim 118, wherein the second computing device further determines the call contains an alternative identifier, wherein the accessing the interface of the second object is based on the alternative identifier.